

THYMELICUS LINEOLA (HESPERIIDAE) IN ILLINOIS

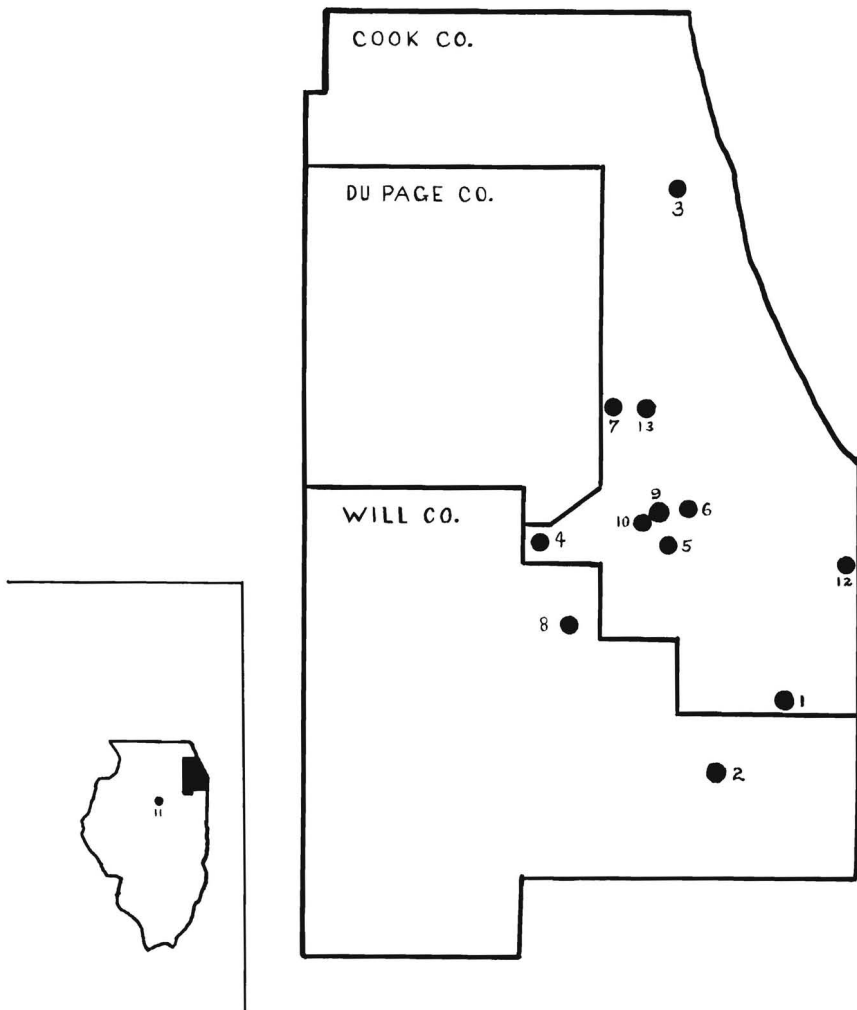
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Range expansion of the introduced skipper *Thymelicus lineola* (Ochsenheimer) in North America has been well documented since its presence was first recognized in 1910. Burns (1966) summarizes these accounts and presents a complete bibliography. He points out that the rate of expansion of *lineola* into new territory has shown a notable increase in the last fifteen years. In some areas it has become so abundant as to constitute an agricultural pest requiring the application of control measures (Arthur, 1966). In emphasizing that the actual range of the species is doubtless already much more extensive than published reports indicate, Burns appeals for further description and study of the process of its invasion of new areas while it is still under way. He does not, however, mention its occurrence in Illinois; for although it has been present in that state at least since 1957, and is now an apparently well-established resident, no previous account of its existence there has been published. For the same reason, Heitzman (1963) was misled into stating that the capture of a specimen at Culver, Indiana on June 23, 1962, by F. S. Badger represented a western range extension in the United States.

In the spring of 1964, while examining the collections of the Field Museum of Natural History of Chicago during my studies of the distribution of Illinois butterflies, I was surprised to find a specimen of *lineola* taken in Chicago on July 6, 1960 by Mr. Gregory Nielsen. Believing this to be a new western record for the United States as well as a new state record, I immediately contacted Mr. Nielsen, who was so kind as to make available to me his records of the species, as well as his correspondence with Mr. H. K. Clench in which the latter had given him the following earlier record from Illinois.

The first known observation of *lineola* in Illinois took place June 17, 1957, when Mr. Robert W. Surdick of Pittsburgh, Pennsylvania, took ten specimens and reported "many more seen, all fresh" at Park Forest, in southern Cook County. On June 20, 1957, Surdick took nine more specimens at Monee, in eastern Will County a few miles south of Park Forest, and again reported the observation of many additional fresh examples (Clench, *in litt.* to Nielsen). The apparent density of these populations suggests their existence for at least a year previous to this time.



EXPLANATION OF PLATE

Outline map of the Chicago metropolitan area showing the localities where *Thymelicus lineola* has been taken, with the date of first capture for each. Inset map shows the portion of Illinois depicted in the larger map. The localities are as follows: 1. Park Forest (1957). 2. Monee (1957). 3. Northwest Highway and Merrimac Avenue, Chicago (1960). 4. Lemont (1961). 5. Palos Park (1965). 6. Chicago Ridge (1965). 7. South Bemis Woods near Western Springs (1965). 8. Messengers Woods near Lockport (1965). 9. Country Lane Woods near Willow Springs (1965). 10. Teason's Woods near Palos Park (1966). 11. Streator, La Salle County (inset map) (1966). 12. Burnham (1966). 13. Arie Crown Woods near La Grange (1966).

No further records of *lineola* from Illinois are known until those of Nielsen. Between July 1 and 6, 1960, he captured several specimens along the Chicago and North Western Railway tracks near Merrimac Avenue and the Northwest Highway in Chicago. This is an urban area of small homes and light industry. He did not find it there in subsequent years (personal communication); nor did I observe the species on a visit to the area on July 13, 1964, although this was probably too late for it.

Mr. Norman G. Seaborg of Lockport, Illinois recorded *lineola* from the vicinity of Lemont, in southwestern Cook County, on July 1, 1961. The number of specimens observed or taken and the exact locality were not stated (Seaborg, personal communication).

On June 22, 1965, I returned to Nielsen's locality in northwest Chicago but again failed to find *lineola*. The next day, however, during a routine collecting trip and without *lineola* in mind, I took three males and one female of the butterfly along the tracks of the Norfolk and Western (formerly Wabash) Railway near the depot in Palos Park, Illinois. Later the same day, I obtained another fresh male near the intersection of the same railroad and the Indiana Harbor Belt Railroad in Chicago Ridge, Illinois, about 3½ miles north of Palos Park. This general area is roughly 20 miles south of the Nielsen locality and nearly the same distance north of those of Surdick.

The following day, June 24, I found *lineola* fairly numerous at Chicago Ridge, in a very limited area immediately adjacent to the railroad intersection. Five males and two females were taken and a number of others seen between 3:30 and 7:30 P.M. The majority of individuals appeared to be fresh. On June 25, one male and two females were taken and several others observed. Thereafter no more captures were made, in order to avoid threatening the existence of the colony. On June 26, five individuals were seen; on the 27th, one; July 1, three, and July 2, two. Although the area was observed almost daily for the rest of the summer, no more were seen that year. Some anxiety was felt for the survival of the species due to weed mowing later in the summer and grass fires which swept the area early the following spring.

Other collectors in the Chicago area also found *lineola* in 1965. Mr. Richard Arnold of Hinsdale took one male on June 19 in South Bemis Woods Forest Preserve near Western Springs (Arnold, personal communication). Seaborg reported it from a locality about a mile north of Messengers Woods Forest Preserve, east of Lockport in Will County, on June 18, and from Country Lane Woods Forest Preserve, near Willow Springs, southwest of Chicago, on July 5.

In 1966 both the Palos Park and Chicago Ridge localities were closely observed almost daily after the beginning of June to determine the date of appearance of *lineola*. This proved to be June 18, when a fresh male was taken at each of the two places. Thereafter, observations were limited to the Chicago Ridge area for reasons of convenience. One more male was taken June 19, but by the 20th a virtual population explosion occurred. About seven o'clock that evening, a vast number of *lineola* were found to be present along the N. & W. right-of-way about 200 feet southwest of last year's center of population. As I walked through the grass in which they were resting, scores of them arose, several at each step. Of the 18 individuals taken on June 20, two were females, their appearance having followed that of the males by only two days.

By June 23 *lineola* was still more abundant in the same area, the most of any Hesperiid that I have ever seen. It was present in comparable numbers along the railroad for at least a mile northeasterly, and very probably in the opposite direction as well, possibly as far as the Palos Park station. The species continued in essentially undiminished numbers through the end of June, although by the latter date some were becoming worn.

Meanwhile, *lineola* had been found at another location some 100 miles southwest of Chicago. Mr. Gary McCoy of Streator, Illinois, in southern La Salle County, captured three individuals there on June 20, 1966. I examined these on June 27, and later that day took three more somewhat worn specimens in the same locality. Again the scene was a railroad right-of-way, in this case that of the Chicago, Burlington and Quincy at the north edge of the city. This is at present the southwesternmost point from which *lineola* has been recorded, not only in Illinois but for the entire Great Lakes region.

Still another population was encountered on July 5, 1966, when I saw several *lineola*, of which three were taken, in Teason's Woods Forest Preserve about two miles northwest of the previous locality in Palos Park. This was my first observation of the skipper away from the immediate vicinity of a railroad.

At the Chicago Ridge locality by July 6, the numbers of *lineola* had become noticeably reduced. On July 9, only two were seen; July 10, three; July 13 and 14, one; and thereafter none, although observations were again continued much later.

Additional localities in the Chicago area from which other collectors reported *lineola* in 1966 were Burnham, in southeastern Cook County, where Seaborg captured a single individual on June 30 (Seaborg, per-

sonal communication) and Arie Crown Woods near La Grange, in west central Cook County, where Arnold obtained five males on June 24 (Arnold, personal communication). Both of these collectors also found *lineola* in 1966 in previously reported areas. These additional records bring the total number of localities from which *lineola* has been reported in Illinois to 13, of which all but one (Streator) are in the Chicago metropolitan area.

It will be seen that most of the localities where *lineola* has been found in Illinois are immediately proximate to railroads, giving added credence to the opinion that these carriers may act as agents of transportation of the species to new territories. Arthur (1966) and Burns (1966) believe that hay shipments may play a part in its spread.

I have not as yet found the albinistic form *pallida* Tutt. While other observers have reported that it has constituted a recognizable fraction of the populations they studied, "a few percent" according to Ehle (1958), I found no examples in which the ground color was more than a very little lighter than average.

Although I was able to visit the Chicago Ridge locality almost daily, the time available for observation on most days was very limited, of the order of twenty minutes or less each visit. This fact precluded any meaningful attempt to learn much about the insect beyond its relative numbers and flight period. In its flight habits I found *lineola* strongly suggestive of the related species *Ancyloxypha numitor*, which at times was flying with it; so that more than once I netted a supposed *lineola* only to find it was the former species.

SUMMARY

First found in the Chicago area in 1957, *Thymelicus lineola* is now apparently well established in several localities there and is expanding its range southwestwardly in Illinois. These localities are summarized in the explanation of Plate 1, which is an outline map of the Chicago area showing them. In 1966, which may or may not have been an average year, *lineola* first appeared shortly after the middle of June and quickly reached a peak of abundance during which it virtually swarmed in certain localities. After the beginning of July its numbers began to diminish until by the middle of the month it had disappeared.

ACKNOWLEDGMENTS

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the Surdick records of *lineola*. My thanks also to Messrs. Richard Arnold, Gary McCoy, Gregory Nielsen and Norman G. Seaborg for furnishing their records of the species.

LITERATURE CITED

- ARTHUR, A. P., 1966. The present status of the introduced skipper, *Thymelicus lineola* (Ochs.) (Lepidoptera: Hesperidae), in North America and possible methods of control. Can. Ent., 98: 622-626.
- BURNS, JOHN M., 1966. Expanding distribution and evolutionary potential of *Thymelicus lineola* (Lepidoptera: Hesperidae), an introduced skipper, with special reference to its appearance in British Columbia. Can. Ent. 98: 859-866.
- EHLE, GEORGE, 1958. *Adopaea lineola* (Hesperidae) in Pennsylvania, a new state record. Lepid. News 12: 15-16.
- HEITZMAN, J. R., 1963. Record of *Thymelicus lineola* from Indiana. In Season Summary for 1962. News of the Lep. Soc. No. 4, 1 June 1963, p. 8.

INCISALIA HENRICI IN MANITOBA AND MINNESOTA (LYCAENIDAE)

The known range for *Incisalia henrici* (Grote & Robinson) was extended considerably northwestward when William A. Bergman, Patrick J. Conway and I collected six males (28-V-1967) 10 miles southeast of Richer, Manitoba in the Sandilands Provincial Forest. The forest growth here is principally aspen-birch interspersed with jack pine and a few black spruce muskegs. The soil is shallow and often sandy with bearberry the principal ground cover. *Incisalia polios* Cook & Watson was exceedingly common throughout the area while *Incisalia augustinus* (Westwood) and *Incisalia niphon clarki* Freeman seemed to be generally distributed but less abundant. *I. henrici* was local to one opening in an aspen glade where individuals lit on bare twigs or buds about three feet off the ground. The other three species almost invariably lit on the ground or on low bushes not over a foot high.

This location extends the known range of *I. henrici* nearly 700 miles northwest from where it has previously been recorded in Newaygo and Crawford counties Michigan. However, the range may be continuous as three recent records from Minnesota indicate: John S. Nordin of Webster, South Dakota collected a specimen (16-V-1964) at St. Croix State Park, Pine county; I collected a female at the same location (20-V-1967); and John T. Sorensen of Minneapolis collected a female (16-VI-1967) near Craigville, Koochiching county.

I thought the *I. henrici* from Manitoba possibly might represent an endemic subspecies and I asked Harry K. Clench of the Carnegie Museum to examine them. Clench has advised me that he found no variation from nominate *I. henrici henrici*. One male from Manitoba and the Pine county female were retained in the Carnegie Museum at Pittsburgh. Another Manitoba male is being placed in the Canadian National Collection and a third is retained in my personal collection. The three males collected by Conway and Bergman remain in their personal collections at Aledo, Illinois and Minneapolis.—JOHN H. MASTERS, P.O. Box 7511, St. Paul, Minnesota